

coefficients M are adaptively determined in accordance with image pick-up environment and image pick-up condition, thus making it possible to perform linear matrix processing by using the linear matrix coefficients M.

CLAIMS

1 An image pick-up apparatus including an image pick-up device unit comprised of color filters having different spectral characteristics, and serving to pick up image of object,

the image pick-up apparatus comprising:

adjustment means for adjusting color reproduction value and noise value representing noise feeling;

matrix coefficient determination means for determining matrix coefficients on the basis of adjustment of the adjustment means; and

matrix transform processing means for performing matrix transform processing with respect to an image which has been picked up at the image pick-up device unit on the basis of the matrix coefficients.

2 The image pick-up apparatus as set forth in claim 1,

wherein the adjustment means serves to adaptively adjust the color reproduction value and the noise value in accordance with image pick-up sensitivity of the image pick-up apparatus.

3 The image pick-up apparatus as set forth in claim 1,

wherein the adjustment means serves to adaptively adjust the color

reproduction value and the noise value in accordance with the environment where image pick-up operation is performed by the image pick-up apparatus.

4 The image pick-up apparatus as set forth in claim 1,

wherein the adjustment means serves to arbitrarily adjust the color reproduction value and the noise value.

5 An image pick-up method of picking up image of object by an image pick-up apparatus including an image pick-up unit comprised of color filters having different spectral characteristics, and serving to pick up image of object,

the image pick-up method including:

a first step of adjusting color reproduction value and noise value representing noise feeling;

a second step of determining matrix coefficients on the basis of adjustment of the first step; and

a third step of performing matrix transform processing with respect to an image which has been picked up at the image pick-up device unit on the basis of the matrix coefficients.